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1646

DATE: 02/11/2002 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/899,429A TIME: 13:40:42

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        Himmler, Adolph
        Maurer-Fogy, Ingrid
        Stratowa, Christian
8 <120> TITLE OF INVENTION: TNF Receptors, TNF Binding Proteins and DNAs Coding for
        Them
11 <130> FILE REFERENCE: 98-385-J
13 <140> CURRENT APPLICATION NUMBER: 09/899,429A
14 <141> CURRENT FILING DATE: 2001-07-03
16 <150> PRIOR APPLICATION NUMBER: 09/792,356
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26 <151> PRIOR FILING DATE: 1993-11-17
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29 <151> PRIOR FILING DATE: 1992-01-02
31 <150> PRIOR APPLICATION NUMBER: 07/511,430
32 <151> PRIOR FILING DATE: 1990-04-20
34 <160> NUMBER OF SEQ ID NOS: 97
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38 <210> SEO ID NO: 1
39 <211> LENGTH: 1368
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40 <212> TYPE: DNA

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41 <213> ORGANISM: Homo sapiens

45 <222> LOCATION: (1)..(1365)

RAW SEQUENCE LISTING DATE: 02/11/2002 PATENT APPLICATION: US/09/899,429A TIME: 13:40:42

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|    |            |       |       |       |       | at.a  | cct         | σac   | cta    | cta   | cta   | cca   | cta   | ata   | ctc   | cta          | 48    |
|    | _          |       |       |       |       |       | Pro         | _     | _      | _     | _     |       |       | _     |       | -            |       |
| 66 | 1          | 017   |       |       | 5     |       | 110         | p     |        | 10    |       |       |       |       | 15    |              |       |
| -  |            | cta   | ++~   | ata   | _     | a t a | tac         | 000   | t c =  |       | a++   | a++   | aas   | cta   |       | cct          | 96    |
|    |            |       |       |       |       |       | Tyr         |       |        |       |       |       |       |       |       |              | 90    |
|    | GIU        | ьец   | ьeu   |       | GIĀ   | TIE   | TAT         | PIO   |        | GIY   | vai   | me    | Gry   |       | vai   | PIO          |       |
| 70 |            |       |       | 20    |       |       |             |       | 25     |       |       |       |       | 30    |       |              | 144   |
|    |            |       |       | _     |       |       | aag<br>-    | _     | -      |       |       |       |       |       |       |              | 144   |
|    | His        | Leu   | _     | Asp   | Arg   | GLu   | Lys         |       | Asp    | Ser   | Val   | Cys   |       | GIn   | GIY   | ГĀЗ          |       |
| 74 |            |       | 35    |       |       |       |             | 40    |        |       |       |       | 45    |       |       |              |       |
|    |            |       |       |       |       |       | aat         | -     |        |       |       |       |       |       |       |              | 192   |
| 77 | ${	t Tyr}$ | Ile   | His   | Pro   | Gln   | Asn   | Asn         | Ser   | Ile    | Cys   | Cys   | Thr   | Lys   | Cys   | His   | Lys          |       |
| 78 |            | 50    |       |       |       |       | 55          |       |        |       |       | 60    |       |       |       |              |       |
| 80 | gga        | acc   | tac   | ttg   | tac   | aat   | gac         | tgt   | cca    | ggc   | ccg   | ggg   | cag   | gat   | acg   | gac          | 240   |
| 81 | Gly        | Thr   | Tyr   | Leu   | Tyr   | Asn   | Asp         | Cys   | Pro    | Gly   | Pro   | Gly   | Gln   | Asp   | Thr   | Asp          |       |
| 82 | 65         |       |       |       |       | 70    |             |       |        |       | 75    | _     |       |       |       | 80           |       |
| 84 | tgc        | agg   | gag   | tgt   | gag   | agc   | ggc         | tcc   | ttc    | acc   | gct   | tca   | gaa   | aac   | cac   | ctc          | 288   |
|    |            |       |       |       |       |       | Gly         |       |        |       |       |       |       |       |       |              |       |
| 86 | _          | -     |       | _     | 85    |       | -           |       |        | 90    |       |       |       |       | 95    |              |       |
| 88 | aga        | cac   | tqc   | ctc   | agc   | tqc   | tcc         | aaa   | tqc    | cqa   | aaq   | gaa   | atg   | ggt   | cag   | gtg          | 336   |
|    | -          |       | _     |       | _     | -     | Ser         |       |        |       |       |       |       |       |       |              |       |
| 90 | 5          |       | - 4 - | 100   |       | - 2 - |             | - 1   | 105    | _     | -     |       |       | 110   |       |              |       |
|    | αaα        | atc   | tct   |       | tac   | aca   | gtg         | gac   |        | gac   | acc   | ata   | tat   |       | tac   | agg          | 384   |
|    |            |       |       |       |       |       | Val         |       |        |       |       |       |       |       |       |              |       |
| 94 | Gru        | 110   | 115   | 561   | Cys   | T 111 | <b>*</b> 41 | 120   | 111 9  | пор   | # 11# | , 44  | 125   | 011   | 015   | *** 9        |       |
|    | 224        | 220   |       | tac   | caa   | cat   | tat         |       | a a t  | maa.  | 220   | ctt   |       | can   | tac   | ttc          | 432   |
|    |            |       |       |       |       |       | Tyr         |       |        |       |       |       |       |       |       |              | 452   |
| 98 | гуу        | 130   | GIII  | тут   | Ary   | UIS   | 135         | пр    | 261    | GIU   | ASII  | 140   | FIIC  | GIII  | Cys   | Tile         |       |
|    | 0 004      |       |       |       | . +   |       |             | . ~~  |        | . ~+  |       |       | . +   | - tac |       |              | 480   |
|    |            |       |       |       |       |       |             |       |        |       |       |       |       |       |       | ggag         | 400   |
|    |            |       | s sei | тес   | Cys   |       |             | і Сту | 7 1111 | . val |       |       | 1 261 | L Cys | , GTI | n Glu<br>160 |       |
|    | 2 145      |       |       |       |       | 150   |             |       |        |       | 15    |       |       |       |       |              | E 2 0 |
|    |            |       |       |       |       |       |             |       |        |       |       |       |       |       |       | a gaa        | 528   |
|    |            | S GII | n Asi | ı Tnı |       |       | s Thi       | Cys   | 5 H15  |       |       | y Pne | e Pne | e Let |       | g Glu        |       |
| 10 |            |       |       |       | 165   |       |             |       |        | 170   |       |       |       |       | 17    |              | 576   |
|    |            |       |       |       |       |       |             |       |        |       |       |       |       |       |       | acg          | 576   |
|    |            | ı Glı | ı Cys |       |       | Cy:   | s Ser       | Asr   |        |       | s Lys | s Sei | : Lei |       |       | s Thr        |       |
| 11 |            |       |       | 180   |       |       |             |       | 185    |       |       |       |       | 190   |       | _            |       |
|    | -          |       | _     |       |       |       | -           |       |        | _     |       | -     |       |       |       | c tca        | 624   |
| 11 | 3 Lys      | s Le  | ı Cys | s Leu | Pro   | Gli   | ı Ile       |       |        | ı Val | L Ly: | s Gly |       |       | ı Ası | Ser          |       |
| 11 |            | •     | 195   |       |       |       |             | 200   |        |       |       |       | 205   |       |       |              |       |
|    |            |       |       |       |       |       |             |       |        |       |       |       |       |       |       | c ctt        | 672   |
| 11 | 7 Gl       | Thu   | r Thi | . Val | . Let | ı Leı | ı Pro       | Leu   | ı Val  | . Ile | e Phe | e Phe | e Gly | y Leu | ı Cys | s Leu        |       |
| 11 | В          | 210   | )     |       |       |       | 215         | 5     |        |       |       | 220   | )     |       |       |              |       |
| 12 | 0 tta      | a tco | cto   | cto   | : ttc | att   | t ggt       | : tta | ato    | , tat | cg(   | c tac | caa   | a cgg | , tg  | g aag        | 720   |
| 12 | l Lei      | ı Sei | r Lei | ı Let | ı Phe | e Ile | e Gly       | Let   | ı Met  | туз   | Ar    | д Туі | Glr   | n Arg | Tr    | . Lys        |       |
| 12 | 2 22       | 5     |       |       |       | 230   | ם           |       |        | _     | 23    | 5     |       |       |       | 240          |       |
|    |            |       | cto   | tac   | tco   | ati   | t gtt       | : tgt | ggc    | , aaa | a tc  | gaca  | a cct | t gaa | aaa   | a gag        | 768   |
|    |            | -     |       |       |       |       | _           | _     |        |       |       |       |       | _     |       | s Glu        |       |
| 12 |            | 4     |       | - 4   | 245   |       |             | 4     | _      | 250   |       |       |       |       | 25    |              |       |
|    |            |       |       |       |       |       |             |       |        |       |       |       |       |       |       |              |       |

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|-----|-------|-------|-------|------|------|------------|-------|------|-----|-------|-------------|------|-----|-------------|-----|-------------|------|
| 129 | Gly   | Glu   | Leu   | Glu  | Gly  | Thr        | Thr   | Thr  |     | Pro   | Leu         | Ala  | Pro | Asn         | Pro | Ser         |      |
| 130 |       |       |       | 260  |      |            | •     |      | 265 |       |             |      |     | 270         |     |             |      |
|     |       | _     |       |      |      | ggc        |       |      |     |       |             |      |     |             |     |             | 864  |
| 133 | Phe   | Ser   | Pro   | Thr  | Pro  | Gly        | Phe   |      | Pro | Thr   | Leu         | Gly  |     | Ser         | Pro | Val         |      |
| 134 |       |       | 275   |      |      |            |       | 280  |     |       |             |      | 285 |             |     |             |      |
|     |       | _     |       |      |      | acc        |       | -    |     |       |             |      |     |             |     |             | 912  |
|     | Pro   | Ser   | Ser   | Thr  | Phe  | Thr        | Ser   | Ser  | Ser | Thr   | Tyr         |      | Pro | Gly         | Asp | Cys         |      |
| 138 |       | 290   |       |      |      |            | 295   |      |     |       |             | 300  |     |             |     |             | _    |
|     |       |       |       |      | _    | ccc        | -     |      |     |       |             |      |     |             |     |             | 960  |
|     |       | Asn   | Phe   | Ala  | Ala  | Pro        | Arg   | Arg  | Glu | Val   |             | Pro  | Pro | Tyr         | Gln |             |      |
| 142 |       |       |       |      |      | 310        |       |      |     |       | 315         |      |     |             | •   | 320         |      |
|     | -     |       |       |      |      | gcg        |       |      |     |       |             |      |     |             |     |             | 1008 |
|     | Ala   | Asp   | Pro   | Ile  |      | Ala        | Thr   | Ala  | Leu |       | Ser         | Asp  | Pro | Ile         |     | Asn         |      |
| 146 |       |       |       |      | 325  |            |       |      |     | 330   |             |      |     |             | 335 |             |      |
|     |       |       | _     | _    |      | gag.       |       |      |     |       |             |      |     |             |     |             | 1056 |
|     | Pro   | Leu   | GIn   | _    | Trp  | Glu        | Asp   | Ser  |     | Hls   | ьуs         | Pro  | GIn |             | Leu | Asp         |      |
| 150 |       |       |       | 340  |      |            |       |      | 345 |       |             |      |     | 350         |     |             | 1104 |
|     |       |       |       |      |      | acg        |       |      |     |       |             |      |     |             |     |             | 1104 |
|     | Thr   | Asp   | _     | Pro  | Ala  | Thr        | Leu   |      | Ala | vaı   | vaı         | GIU  |     | vaı         | Pro | Pro         |      |
| 154 |       |       | 355   |      |      |            |       | 360  |     |       |             |      | 365 |             |     |             | 1150 |
|     | -     | _     |       | _    | -    | ttc        |       |      | _   |       |             | -    | -   | _           |     |             | 1152 |
|     | ьеu   | _     | Trp   | гаг  | GIU  | Phe        |       | Arg  | Arg | Leu   | GIA         |      | ser | Asp         | HIS | GIU         |      |
| 158 |       | 370   |       |      |      |            | 375   |      |     |       | +           | 380  | ~~~ | <b>~</b> ~~ | ~~~ | <b>~</b> ~~ | 1200 |
|     |       | -     |       | -    |      | ctg        | -     |      |     | _     | -           | _    | -   | -           |     |             | 1200 |
| 162 |       | Asp   | Arg   | ьeu  | GIU  | Leu<br>390 | GIII  | ASII | GIY | AIG   | 395         | ьеu  | AIG | GIU         | нта | 400         |      |
|     |       | 200   | ata   | ata  | aca  | acc        | taa   | 200  | caa | cac   |             | cca  | caa | cac         | aaa |             | 1248 |
|     |       |       |       |      |      | Thr        |       |      |     |       |             |      |     |             |     |             | 1240 |
| 166 | TÄT   | 261   | Met   | ьец  | 405  | 1111       | пр    | Arg  | Arg | 410   | TIIT        | FIO  | ALY | AIG         | 415 | AIG         |      |
|     | 3 C C | cta   | aaa   | cta  |      | gga        | cac   | ata  | ctc |       | aac         | atσ  | αac | cta         |     | aac         | 1296 |
|     | _     | _     |       | _    | _    | Gly        | _     |      |     | _     | _           | _    | _   |             |     |             | 1230 |
| 170 | 1111  | шец   | Olu   | 420  | шец  | 017        | 9     | vul  | 425 | *** 9 | шьр         | 1100 |     | 430         |     | 011         |      |
|     | tac   | cta   | ααα   |      | atc  | gag        | σασ   | aca  |     | tac   | aac         | ccc  | acc |             | ctc | cca         | 1344 |
|     |       |       |       |      |      | Glu        |       |      |     |       |             |      |     |             |     |             |      |
| 174 | 0,0   |       | 435   |      |      | 014        | 014   | 440  | 204 | 010   | <b>U</b> -1 |      | 445 |             |     |             |      |
|     | ccc   | aca   |       | aσt  | ctt  | ctc        | aσa   |      |     |       |             |      |     |             |     |             | 1368 |
|     |       |       |       | _    |      | Leu        | _     | - ,  |     |       |             |      |     |             |     |             |      |
| 178 |       | 450   |       |      |      |            | 455   |      |     |       |             |      |     |             |     |             |      |
|     | <210  |       | EQ II | ON C | : 2  |            |       |      |     |       |             |      |     |             |     |             |      |
|     |       |       | ENGTE |      |      | •          |       |      |     |       |             |      |     |             |     |             |      |
|     |       |       | PE:   |      |      |            |       |      |     |       |             |      |     |             |     |             |      |
| 184 | <213  | 3> OI | RGAN  | ISM: | Homo | sap        | oiens | 3    |     |       |             |      |     |             |     |             |      |
|     |       |       | EQUE  |      |      | -          |       |      |     |       |             |      |     |             |     |             |      |
|     |       |       |       |      |      | Val        | Pro   | Asp  | Leu | Leu   | Leu         | Pro  | Leu | Val         | Leu | Leu         |      |
| 188 | 1     | -     |       |      | 5    |            |       | -    |     | 10    |             |      |     |             | 15  |             |      |
|     | Glu   | Leu   | Leu   | Val  | Gly  | Ile        | Tyr   | Pro  | Ser | Gly   | Val         | Ile  | Gly | Leu         | Val | Pro         |      |
| 191 |       |       |       | 20   | -    |            | -     |      | 25  | -     |             |      | _   | 30          |     |             |      |
| 193 | His   | Leu   | Gly   | Asp  | Arg  | Glu        | Lys   | Arg  | Asp | Ser   | Val         | Cys  | Pro | Gln         | Gly | Lys         |      |
|     |       |       |       |      |      |            |       |      |     |       |             |      |     |             |     |             |      |

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|-----|-----------|--------------|------------|-------|----------|------------|----------|----------|------------|--------------|------------|------------|------|-----------|----------|------------|
|     | Tyr       | Ile          |            | Pro   | Gln      | Asn        | Asn      |          | Ile        | Cys          | Cys        | Thr        |      | Cys       | His      | Lys        |
| 197 | -1-       | 50           |            |       |          |            | 55       |          |            | •            | _          | 60         | •    | •         |          | •          |
| 199 | Gly       | Thr          | Tyr        | Leu   | Tyr      | Asn        | Asp      | Cys      | Pro        | Gly          | Pro        | Gly        | Gln  | Asp       | Thr      | Asp        |
| 200 | 65        |              |            |       |          | 70         |          |          |            |              | 75         |            |      |           |          | 80         |
| 202 | Cys       | Arg          | Glu        | Cys   | Glu      | Ser        | Gly      | Ser      | Phe        | Thr          | Ala        | Ser        | Glu  | Asn       | His      | Leu        |
| 203 |           |              |            |       | 85       |            |          |          |            | 90           |            | _          |      | _         | 95       | _          |
|     | Arg       | His          | Cys        |       | Ser      | Cys        | Ser      | Lys      |            | Arg          | Lys        | Glu        | Met  |           | Gln      | Val        |
| 206 | <b>61</b> | <b>-</b> 1 - | <b>G</b>   | 100   | <b>G</b> | m\         | **- 1    | <b>3</b> | 105        | <b>1</b>     | mla sa     | 37- J      | 0    | 110       | 0        | 3 m.m      |
| 208 | GIU       | TTE          | ser<br>115 | ser   | Cys      | Thr        | vaı      | 120      | Arg        | Asp          | THE        | val        | 125  | GIY       | Cys      | AIG        |
|     | Lvc       | Δen          |            | ጥህጉ   | Δra      | His        | ጥህጉ      |          | Ser        | Glu          | Δsn        | T.e.u      |      | Gln       | Cvs      | Phe        |
| 212 | цуs       | 130          | GIII       | -11-  | n. y     | 1113       | 135      | 115      | DCI        | Olu          | 71511      | 140        | 1    | 0         | 0,10     | 1.10       |
|     | Asn       |              | Ser        | Leu   | Cys      | Leu        |          | Gly      | Thr        | Val          | His        |            | Ser  | Cys       | Gln      | Glu        |
|     | 145       | -1-          |            |       | -1-      | 150        |          | 2        |            |              | 155        |            |      | _         |          | 160        |
| 217 | Lys       | Gln          | Asn        | Thr   | Val      | Cys        | Thr      | Cys      | His        | Ala          | Gly        | Phe        | Phe  | Leu       | Arg      | Glu        |
| 218 |           |              |            | •     | 165      |            |          |          |            | 170          |            |            |      |           | 175      |            |
| 220 | Asn       | Glu          | Cys        | Val   | Ser      | Cys        | Ser      | Asn      | Cys        | Lys          | Lys        | Ser        | Leu  | Glu       | Cys      | Thr        |
| 221 |           |              |            | 180   |          |            |          |          | 185        |              |            | _          |      | 190       |          |            |
|     | Lys       | Leu          | _          | Leu   | Pro      | Gln        | Ile      |          | Asn        | Val          | Lys        | Gly        |      | Glu       | Asp      | Ser        |
| 224 | ~ 3       | m)           | 195        | 1     |          | -          | <b>n</b> | 200      | 77- 7      | <b>-</b> 1 - | D1         | nl         | 205  | T         | <b>G</b> | T          |
|     | GTĀ       |              | Thr        | vaı   | ьeu      | Leu        |          | ьeu      | vaı        | IIe          | Pne        | 220        | GIY  | ьeu       | Cys      | Leu        |
| 227 | Tou       | 210          | LOU        | LOU   | Dho      | Ile        | 215      | Lau      | Mot        | Фυν          | λνα        |            | Gĺn  | Δra       | Ψrn      | T.vc       |
|     | 225       | 501          | пси        | пси   | rne      | 230        | Gry      | пси      | ricc       | - Y -        | 235        | - 1 -      | 0111 | n g       | 115      | 240        |
|     |           | Lvs          | Leu        | Tvr   | Ser      | Ile        | Val      | Cvs      | Gly        | Lys          |            | Thr        | Pro  | Glu       | Lys      |            |
| 233 |           |              |            |       | 245      |            |          | _        | _          | 250          |            |            |      |           | 255      |            |
| 235 | Gly       | Glu          | Leu        | Glu   | Gly      | Thr        | Thr      | Thr      | Lys        | Pro          | Leu        | Ala        | Pro  | Asn       | Pro      | Ser        |
| 236 |           |              |            | 260   |          |            |          |          | 265        |              |            |            |      | 270       |          |            |
| 238 | Phe       | Ser          | Pro        | Thr   | Pro      | Gly        | Phe      |          | Pro        | Thr          | Leu        | Gly        | Phe  | Ser       | Pro      | Val        |
| 239 |           |              | 275        |       |          | _          |          | 280      | _          |              | _          |            | 285  |           |          | _          |
|     | Pro       |              | Ser        | Thr   | Phe      | Thr        |          | Ser      | Ser        | Thr          | Tyr        |            | Pro  | GIĀ       | Asp      | Cys        |
| 242 | Dwo       | 290          | Dho        | x 1 - | 212      | Dro        | 295      | 7 × ~    | C1.1       | Wal          | ת 1 ת      | 300<br>Bro | Dro  | Пиг       | Cln      | C1 17      |
|     | 305       | ASII         | FIIE       | нта   | ніа      | Pro<br>310 | AIG      | AIG      | Gru        | vai          | 315        | FIU        | FIU  | TYT       | GIII     | 320        |
|     |           | Asp          | Pro        | Ile   | Leu      | Ala        | Thr      | Ala      | Leu        | Ala          |            | Asp        | Pro  | Ile       | Pro      |            |
| 248 |           |              |            |       | 325      |            |          |          |            | 330          |            | •          |      |           | 335      |            |
| 250 | Pro       | Leu          | Gln        | Lys   | Trp      | Glu        | Asp      | Ser      | Ala        | His          | Lys        | Pro        | Gln  | Ser       | Leu      | Asp        |
| 251 |           |              |            | 340   |          |            |          |          | 345        |              |            |            |      | 350       |          |            |
|     | Thr       | Asp          | Asp        | Pro   | Ala      | Thr        | Leu      | Tyr      | Ala        | Val          | Val        | Glu        |      | Val       | Pro      | Pro        |
| 254 |           |              | 355        |       |          |            |          | 360      |            |              |            |            | 365  |           |          |            |
|     | Leu       |              | Trp        | Lys   | Glu      | Phe        |          | Arg      | Arg        | Leu          | Gly        |            | Ser  | Asp       | His      | Glu        |
| 257 | _,        | 370          | _          | _     | - 1      | _          | 375      |          | <b>~</b> 1 |              | ~          | 380        |      | <b>01</b> |          | G1         |
|     |           | Asp          | Arg        | Leu   | Glu      | Leu        | GIn      | Asn      | GTĀ        | Arg          | Cys<br>395 | ьeu        | Arg  | GIU       | Ala      |            |
|     | 385       | So.~         | Mo+        | Ton   | አ 1 ~    | 390<br>Thr | ш~~      | λνα      | λκα        | ۸ra          |            | Dro        | λνα  | Δνα       | Glu      | 400<br>Ala |
| 263 | тАт       | 361          | rie t      | пеп   | 405      | TIIT       | ıτЪ      | AIY      | AT 9       | 410          | T 11T      | 110        | nr y | A+ 9      | 415      | пта        |
|     | Thr       | Leu          | Glu        | Leu   |          | Gly        | Ara      | Val      | Leu        |              | Asp        | Met        | Asp  | Leu       |          | Glv        |
| 266 |           |              |            | 420   |          | 1          | 9        |          | 425        |              | E          |            | E    | 430       |          | 1          |
|     |           |              |            |       |          |            |          |          |            |              |            |            |      |           |          |            |

RAW SEQUENCE LISTING DATE: 02/11/2002
PATENT APPLICATION: US/09/899,429A TIME: 13:40:42

Input Set : A:\98385Jseq.txt

Output Set: N:\CRF3\02112002\I899429A.raw

```
268 Cys Leu Glu Asp Ile Glu Glu Ala Leu Cys Gly Pro Ala Ala Leu Pro
            435
                                440
                                                     445
271 Pro Ala Pro Ser Leu Leu Arg
272
       450
                            455
275 <210> SEQ ID NO: 3
276 <211> LENGTH: 483
277 <212> TYPE: DNA
278 <213> ORGANISM: Homo sapiens
280 <220> FEATURE:
281 <221> NAME/KEY: CDS
282 <222> LOCATION: (1)..(483)
284 <400> SEQUENCE: 3
285 gat agt gtg tgt ccc caa gga aaa tat atc cac cct caa aat aat tcg
                                                                        48
286 Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln Asn Asn Ser
287
                                         10
                                                                        96
289 att tgc tgt acc aag tgc cac aaa gga acc tac ttg tac aat gac tgt
290 Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr Asn Asp Cys
                                     2.5
                 20
293 cca ggc ccg ggg cag gat acg gac tgc agg gag tgt gag agc ggc tcc
                                                                        144
294 Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu Ser Gly Ser
             35
                                 40
295
297 ttc acc gct tca gaa aac cac ctc aga cac tgc ctc agc tgc tcc aaa
                                                                        192
298 Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser Cys Ser Lys
301 tgc cga aag gaa atg ggt cag gtg gag atc tct tct tgc aca gtg gac
                                                                        240
302 Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys Thr Val Asp
                         70
305 cgg gac acc gtg tgt ggc tgc agg aag aac cag tac cgg cat tat tgg
                                                                        288
306 Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg His Tyr Trp
                     85
309 agt gaa aac ctt ttc cag tgc ttc aat tgc agc ctc tgc ctc aat ggg
                                                                        336
310 Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys Leu Asn Gly
                                    105.
313 acc gtg cac ctc tcc tgc cag gag aaa cag aac acc gtg tgc acc tgc
                                                                        384
314 Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val Cys Thr Cys
315
            115
                                                     125
317 cat gca ggt ttc ttt cta aga gaa aac gag tgt gtc tcc tgt agt aac
                                                                        432
318 His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser Cys Ser Asn
                            135
                                                                        480
321 tgt aag aaa agc ctg gag tgc acg aag ttg tgc cta ccc cag att gag
322 Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro Gln Ile Glu
323 145
                        150
                                             155
325 aat
                                                                        483
326 Asn
329 <210> SEQ ID NO: 4
330 <211> LENGTH: 161
331 <212> TYPE: PRT
332 <213> ORGANISM: Homo sapiens
334 <400> SEQUENCE: 4
```

Use of n and/or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

· PATENT APPLICATION: US/09/899,429A

DATE: 02/11/2002 TIME: 13:40:43

Input Set : A:\98385Jseq.txt

Output Set: N:\CRF3\02112002\I899429A.raw

```
L:1494 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:1622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:1654 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:1692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:2225 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:2245 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:2291 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32
L:2357 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36
L:2432 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41
L:2473 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2476 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2495 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2531 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
```